RESPONSE TO CDPHE COMMENTS
On
March 19, 2004 Draft Rico Townsite Soils VCUP Application

June 24, 2004

Following are responses to comments on the Draft Rico Townsite Soils VCUP Application dated March 19, 2004 from Mark Walker of the Colorado Department of Public Health and Environment (CDPHE)/Voluntary Cleanup Program in a letter dated May 11, 2004. These responses are submitted on behalf of Atlantic Richfield Company (AR), Rico Renaissance, LLC (RR), Rico Properties, LLC (RP), and the Town of Rico (Town), collectively the co-Applicants.

Each of the comments is quoted below and a response provided. Note that in many cases the response directs the reader's attention to the section in the accompanying June 24, 2004 version of the Application where the requested change has been made or information provided.

Comment 1.a. *– "It is unclear as to the boundaries of the site for which the application has been submitted. It appears in Figure 7 there are two distinct zones (1 & 2) with two different approaches to sampling and remediation. Notable by its absence is the Van Winkle Waste pile and notable by its apparent inclusion is the river corridor area of Rico. Please confirm if these areas are to be included within the boundaries of the site for which the applicants are asking our approval of remediation plans.*

Response – The revised boundary of the overall Site within which VCUP activities are proposed is shown on Figure 2 - Town of Rico Site Boundary and Property Ownership Map. The Site has been subdivided into two separate zones within which different sampling methodologies are proposed as described in Section 2.5.6.1.3 and in the SAP (Appendix C)/Section 3.0, and as shown on Figures 7a and 7b. It is the Applicant's intention to perform cleanup under this VCUP Application of any and all properties within Zone 1 with soil lead concentrations exceeding the action level(s) to be determined as discussed in Section 3.0 of the Application. The cleanup actions will be detailed and submitted for review and approval by CDPHE prior to implementation in either Phase I or Phase II as discussed in Section 4.0 of the Application. Note that the Site and Zone 1 boundaries have been modified to encompass the Van Winkle mine and waste rock pile site which is immediately contiguous with (and locally encroached by) several residences. Sampling in both Zone 1 and Zone 2 will support development of appropriate ICs, for CDPHE review and approval, as part of the proposed Phase II Work Plan (see Section 4.0 of the Application). See also the response to Comment 2.vi. regarding sampling and institutional controls in Zone 2, and the response to Comment 5.a. in regard to the Dolores River east overbank area.

Comment 1.b. *– "The aforementioned point suggests that this site might be better addressed with multiple applications given the time constraints on our approval and the needs of a complete application. For instance, institutional controls would need to be reviewed and in place before the Department could be in a position to approve a cleanup plan appropriate for future residential development, especially in Zone two. Alternatively, the Department could review only the Sample & Analysis Plan (SAP) while extending the review of the applications as the cleanup plan deficiencies are addressed."*

Response – The Applicants believe that the proposed phased approach as part of a single application is the most efficient and timely way to determine and fully address any elevated soil

lead concentrations that may pose a health risk to the citizens of Rico. Integral to the success of the proposed phased approach is CDPHE's review and approval of the Sampling and Analysis Plan [SAP, Appendix C] and oversight throughout the sampling, analyses, work plan development, cleanup implementation, and final approval stages of the project. In this regard, the Town of Rico ordinance supporting the Application provides that the Town's approval of the approach is "subject to CDPHE approval of all required future work plans described in the application" (included as Appendix D to the Application). It was our understanding from discussion at a meeting with CDPHE Voluntary Cleanup Program staff Mark Walker and Dan Scheppers on April 29, 2004 and subsequent discussions with CDPHE that the proposed approach of staged/phased approvals during implementation of the VCUP is acceptable to the State.

In regard to institutional controls, the Applicant's are committed to developing additional data specifically intended to support the development of appropriate institutional controls (ICs) applicable to future development and/or infill/property modifications within the Site. Points 1 and 2 in Eric Heil's May 26 letter supporting the VCUP Application discuss the planned development of IC's. Development of ICs is planned as part of the Phase II Work Plan activities.

Comment 2.i. *– "A #10 sieve will be used for all samples. If at least 5% of the sample does not pass this sieve then no sample will be taken, except in the case of the Van Winkle waste rock pile and any other obvious source areas. Samples for analysis must be collected at these locations, regardless of sieve size."*

Response – The requirements regarding gradation of materials to be sampled and analyzed for lead concentration have been modified as requested in the SAP (Appendix C)/Section 4.3.

Comment 2.ii. *– "Depth sampling below 2" will not be employed in all yard samples except in select instances. All remedial decisions, (i.e., installation of a 12" barrier of clean soil) will be based on samples collected from 0-2" rather than 0-1".*

Response – Based in part on consultation with the Town of Rico, depth sampling will be selectively performed as described in Section 2.5.6.1.3 and in the SAP (Appendix C)/Sections 3.3.1, 3.2, 3.3.4 and 3.3.5 to support background evaluations, sewer line planning, and development of institutional controls (ICs). Essentially all surface samples to be analyzed for use in the human health risk assessment will be taken from the 0-2 inch depth interval as described in Section 2.5.6.1.3 and in the SAP (Appendix C)/Sections 3.1.1, 3.1.2, 3.1.4, 3.2, and 3.3.3. Alternative depth sampling intervals for near surface soils apply to gardens (0-12 inches).

Comment 2.iii. *– "Before any reduction in the percentage of samples sent in for laboratory confirmation, the applicants will meet with the oversight agency to review correlation data and discuss any proposed reduction. Initially, poor correlation of lab data with field data will involve reanalysis of the remaining sample and possible resampling and analysis."*

Response – The requested clarifications to the laboratory confirmation testing protocol have been made in the SAP (Appendix C)/Section 5.1.

Comment 2.iv. *– "The procedure specified in Section 3.1.4 in Appendix C of the application will be employed for all residential yards."*

Response – All bare play areas in Zone 1 residential lots will be sampled in accordance with the protocol described in the SAP (Appendix C)/Section 3.1.4.

Comment 2.v. – "The applicants will resample the yards where the EPA collected samples last fall.

Response – All residential yards and commercial lots sampled by EPA in the fall of 2003 will be resampled under this VCUP Application.

Comment 2.vi. – "A few issues with the SAP are specific to Zone 2 (as defined on Figure 7). The application is unclear as to the commitment to sample and/or the need to remediate obvious source areas in Zone 2. The frequency of sampling (1 per 25 acres) may not be specific enough to be useful to plan future uses, e.g., one high component of the composite sample may bias negatively the entire 25 acre parcel. The application is unclear as to the specific institutional controls which will be employed to protect future users of Zone 2."

Response – The revised sampling protocols applicable to Zone 2 are presented in Section 2.5.6.1.3 and in the SAP (Appendix C)/Sections 3.2, 3.3.1, 3.3.2, and 3.3.3. Note that the base sampling effort in Zone 2 (as described in Section 3.2 of the SAP) has been modified to an average frequency of approximately 1 sample per 10 acres, and that each sample will be a discreet grab sample rather than a composite of 5 widely dispersed samples. Additional sampling of discreet, identifiable accumulations of source (i.e., mining-related) materials, the Dolores River east overbank area, and unpaved streets within Zone 2 (as well as within Zone 1) is also planned as described in the SAP in Sections 3.3.1, 3.3.2, and 3.3.3, respectively. Please see the response to Comment 1.b. regarding institutional controls. The majority of Zone 2 will be managed through the implementation of ICs, if necessary (see Section 4.1.2). The Applicants anticipate that institutional controls may include a provision for additional "development specific" sampling based on the results of the initial Zone 2 sampling effort under this VCUP Application. See also the response to Comment 5.a. relative to the Dolores River east overbank area within Zone 2.

Comment 3. – The proposed remediation of the Van Winkle waste rock pile is a necessary component of the overall Rico remedial effort, however there are necessary additions if this is to be a component of the overall site. Specific performance goals which demonstrate a successful reclamation effort should be proposed in the application. A proposed grading plan for the final contours including installation of run on/off controls should be included. Some mention of the cap composition (thickness) should be included and any proposals for additions (lime, fertilizer, seed mix) to the pile.

Response – As noted in the response to Comment 1.a. the Van Winkle mine site and waste rock pile are specifically included in Zone 1 and will be cleaned up as part of Phase I VCUP implementation. The performance objectives or goals for the Van Winkle site cleanup as presented in Section 4.1.1 are the same as those established and implemented in previous VCUP cleanups within and around the Rico townsite. The Applicants will work with CDPHE to detail these goals to CDPHE's satisfaction. \Specific details of design features of the proposed cleanup, including a grading plan, runon/runoff controls, cap/cover composition and dimensions, and additives will be developed as part of the Phase I Work Plan and Preliminary Data Report following sampling and field reconnaissance at the site to more thoroughly document the nature of the waste rock and establish the limits of cleanup. This Phase I Work Plan and Preliminary Data Report will have to be approved by CDPHE prior to initiating Phase I actions. Specific measures used on other VCUP clean-ups in the Rico area that may be incorporated in the Van Winkle mine site clean up are described in Section 4.1.1.

Comment 4. – "The plan proposes methodology to calculate a cleanup number for yards not deemed to be an imminent threat to public health. The Department desires a role in the selection of the locations for the twelve bioavailability samples used to calculate the action level. The application is non-specific as to how the electron microscopy work will be utilized and what role, if any, that background levels might factor into the final calculation."

Response – The input and concurrence of CDPHE in the selection of bioavailability sample sites has been clarified in Section 2.5.1.6.4 and in the SAP (Appendix C)/Section 5.2. Lead speciation information from the electron microprobe analyses aids in the interpretation of the bioaccessibility data results, and will allow us to assess whether variations in bioaccessibility are consistently related to differences in mineralogy or to specific source material. This information supports more effective risk management. Background is considered both during risk characterization and risk management in setting action levels. Action levels are not typically set below background for a variety of reasons. These background considerations are clarified in Section 3.3.2. of the VCUP Application.

Comment 5.a. – "EPA sampling detected an area with lead levels at or about 91,000 ppm. What are the plans for this area with respect to remediation? Will it be done in 2004 or 2005? Given that this is the highest level detected, any unacceptable risk posed by the contamination in this area should be addressed as soon as possible.

Response – A specific sampling plan for the Dolores River east overbank area has been developed as described in Section 2.5.6.1.3 and in the SAP (Appendix C)/Section 3.3.2. This sampling effort includes the location from which the referenced high lead level sample was taken. As discussed in Section 4.1.2, a plan for cleanup of this area will be developed as part of the Phase II Work Plan and cleanup implemented in 2005 in a manner that is consistent with the results of the VCUP sampling and applicable risk scenario (i.e., open space/recreational). If an immediate health risk is identified in this area (i.e., high lead level together with a high-risk exposure scenario), then cleanup of the particular area(s) of concern would be accelerated and performed in 2004 as part of Phase I.

Comment 5.b. – "What modifications to the SAP will be employed to adequately assess town streets? Consider the need to coordinate with the imminent installation of the sanitary sewer, protection of workers and proper handling of material generated during the installation. Consider if the streets are not done this year, and contaminated right of way is detected, what measures might be employed to prevent re-contamination (via dust, runoff) of remediated yards.

Response – Sampling of unpaved town streets and the planned sanitary sewer main and trunk pipeline network is described in Section 2.5.6.1.3 and in the SAP (Appendix C)/Sections 3.3.3 and 3.3.5, respectively.

Comment 5.c. – "What are the plans for the proper disposal of soils generated during the remedial effort? The manner in which soils are handled and disposed may involve other regulatory authority(s)."

Response – As discussed in Section 4.1.3, a repository site for the soils generated during implementation of the VCUP has been identified near the townsite and the process to acquire a Certificate of Designation (CD) for that site has been initiated with Dolores County and the Solid Waste Division of CDPHE.